

Uniqueness of the Virginia Tech

NUCLEAR ENGINEERING

<https://nuclear.ncr.vt.edu>



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Prof. & Director



COLLEGE OF ENGINEERING
MECHANICAL ENGINEERING
VIRGINIA TECH.

Unique features of the VT NE

- The only NE Program in the Washington DC Metro Region
- Offering degrees in both NCR and Blacksburg campuses
- Engaged in different applications of nuclear science and engineering: Power, Security, Medicine & Policy
- Faculty: 6 core and 11 affiliate (CS (Visionarium), ME, MSE, Physics, SPIA, & STS)
- Key research capabilities/facilities
 - MARS Center - ICTAS: real-time and virtual reality simulation capability for nuclear systems (in collaboration with different national and international institutions, and various disciplines)
 - Molten salt and high temperature loops for corrosion studies; loops for two-phase and heat transfer studies
 - CHANDLER antineutrino detection system for nuclear system monitoring and safeguards (developed by the VT Physics Dept.)

Unique features of the VT NE

Initiatives

- VNEC nonprofit organization (public-private entity); Prof. Haghghat is the Chairman of the Board (enhancement of nuclear technology and education in Virginia and beyond) (membership – Dominion, Entersource, GE, Newport News, VCU, VT)
- Established a CRADA and an accelerated degree for the USNA midshipmen
- Starting fall 2019, NuSTEP (Nuclear Science, Technology and Policy) certificate will be offered (led by STS in collaboration with SPIA and NE)
- In collaboration with GWU working on the establishment of the NEH for offering degrees, Nuclear Science (GWU) & Nuclear Engineering (VT), to the Ukrainian citizens
- Establishing MOUs with the Jozef Stefan Institute and Ljubljana University (Semester abroad program, exchange of personnel, benchmarking of RAPID)
- Establishing MOUs with NIST neutron research center and the University of Maryland reactor facility